

REMARKS

Claims 21-50 and 54 remain in the application.

The amendments do not include the amendments presented in the Rule 116 response filed on January 6, 2005 but not entered. However, claims 21, 27, 48 have been amended to incorporate the substance of the non-entered claims.

Claim 54 as now numbered corrects a replication of claim numbering found in two claims 47 added in the response of July 2, 2004.

Claim 21 and 27 have been broadened to remove the collimation. These limitations are reintroduced in new claims 55 and 56.

The dependency of claim 23 has been changed. The self-dependency erroneously crept into the claims when they were rekeyed. Claim 24 has been amended to correct another erroneous rekeying as well as to improve the English usage.

The Examiner has rejected claims 21, 22, 24, 27-29, 32-43, 45, 46, and 48-50 under 35 U.S.C. §103(a) as being obvious over Hsu et al.(U.S. Patent 5,589,039, hereafter Hsu) in view of Miyata (U.S. Patent 5,519,373) and Tepman (U.S. Patent 5,527,438) The Examiner has also rejected claims 23, 25, 26, 30, and 44 under 35 U.S.C. §103(a) as being obvious over Hsu, Miyata, and Tepman and further in view of Boys et al. (U.S. Patent 4,500,409).

The Examiner states that the claims require only that the magnetic field be parallel to the substrate surface and that the parallel portion of the magnetic field need not be near the wafer, thus being satisfied by Miyata. This interpretation of the claim language is recent and is not believed to conform to the usual reading of the claims. Nonetheless amendments have been made as necessary to avoid this reading. Amended claims 21, 27, and 28 and unamended claim 41 require a magnetic field extending (horizontally) along the support surface or similar language. This language clearly means that the magnetic field near the support surface is substantially

parallel to the support surface. Such is not disclosed by Miyata, who instead is concerned with the magnetic field being parallel near the target in the plasma generating zone. Miyata's magnetic field distributions in FIGS. 15 and 16 show that the horizontal magnetic field extending through the plasma generating region 30 of FIGS. 17 and 18 quickly becomes non-horizontal above and below the region of horizontal magnetic field. That is, Miyata teaches a horizontal magnetic field near his target which becomes distinctly non-horizontal near his substrate support.

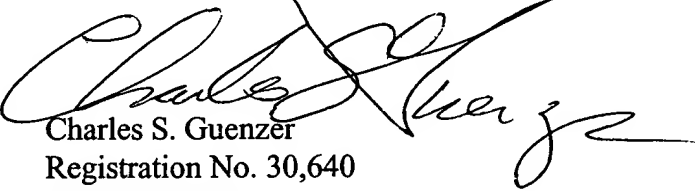
Accordingly base claims 21, 27, 41, and 48 and all claims dependent thereupon should be allowed.

Claim 31 is allowed.

In view of the above amendments and remarks, reconsideration and allowance of all claims are respectfully requested. The Examiner is invited to contact the undersigned attorney to discuss means for resolving the interpretation of the claims.

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